

Atty.
Dkt. No.

Client Ref.

282475

F00-219-U
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J1017 U.S. PTO
10 09 2000



**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: **MANABE et al.**

Cont of Appln. No. 09/677,781 filed Oct. 2, 2000

Filing Date: Herewith

Date: January 23, 2002

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Examiner: S. Mulpuri

Group Art Unit: 2812

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Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
SM	AR	5,278,433	1/1994	Manabe et al.			
	BR	4,844,989	07/89	Murdock			
	CR	4,408,217	10/83	Kobayashi			
	DR	4,268,842	05/81	Jacob et al.			
	ER	5,005,057	04/91	Izumiya et al.			
	FR	4,614,961	09/86	Khan et al.			
	GR	4,153,905	05/79	Charmakedze et al.			
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	IR	4,911,102	03/90	Manabe et al.			
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	MR	4,608,581	08/86	Bagratishvili et al.			
SM	NR	4,473,938	10/84	Kobayashi et al.			

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								Enclosed	No	Enclose	No
SM	OR	2-229475	09/1990	Japan					x		x
	PR	2-275682	11/1990	Japan					x		x
	QR	5-042785	04/1975	Japan					x		x
	RR	59-228776	12/1994	Japan					x		x
	SR	0 620 203 A1	10/1994	Europe	Nakahata				x		x
	TR	0-277597	08/1988	EPA					x		x
	UR	03-034549	02/1991	Japan	Toyoda				x		x
	VR	34549	02/1991	Japan	Hatano				x		x
	WR	4,006,449	09/1990	Germany	Manabe				x		x
SM	XR	57-018377	01/1982	Japan	KOBAYASHI				x		x

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

SM	YR	English Abstract of OKI Japanese Application Published 9/22/82 under No. 57-153479.									
	ZR	I. Akasaki et al., "Effects of AlN Buffer Layer on Crystallographic Structure... by MOVPE", J. Crystal Growth 98 (1989) pp. 209-19.									
	AAR	Liu et al., "Growth morphology and surface-acoustic-wave measurements of AlN films on Sapphire," Journal of Applied Physics, Vol. 46, No. 9, September 1975, pages 3703-3706.									
SM	BBR	Ilegems et al. "Electrical properties of n-Type Vapor-growth Gallium Nitride", J. Phys. Chem. solids., 1973, Vol. 34, pp. 885-895.									

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F00-219-US-DIV-3cont

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	CR 5,205,905	04/1993	Kotaki et al.			
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							Enclosed	No	Enclose	No
Sum	LR 58-012381	01/1983	Japan	Yoneda				X		X
	MR 61-007671	01/1986	Japan	Kawabata				X		X
	NR 57-087184	05/1982	Japan	Tabuchi				X		X
	OR 57-153479	09/1982	Japan	Ooki				X		X
	PR 2-738329	03/1978	Germany	Jacob et al.				X		X
	QR 56-59699	05/1981	Japan	Ooki				X		X
	RR 34549	02/1991	Japan	Hatano				X		X
Sum	SR 3-046018	09/1981	Germany	Kobayashi et al.				X		X

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	UR	Sayyah et al. "The Influence of TMA and SiH4 on the Incorporation Rate of GaInAlxGa1-xN Crystals Grown from TMG and NH3", Journal of Crystal Growth 77 (1986), pp. 424-429 North-Holland, Amsterdam.								
	VR	Bottka, et al., Silicon and beryllium doping of OMVPE Grown..., Journal of Crystal Growth 68 (1984) pp. 54-59, North-Holland Amsterdam								
	WR	Madar et al., "Growth Anisotropy in the CaN/Al2O3 System," Journal of Crystal Growth 40, 1997, pages 239-252.								
	XR	Koide et al., "Epitaxial Growth and Properties of AlxGa1-xN by MOVPE, Reprinted from Journal of the Electrochemical Society, Vol. 133, No. 9, September 1996, pp. 1956-1960								
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Cont of Appln. No.: 09/677,681 filed Oct 2, 2000

Filing Date: Herewith

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G	KR 49-29771	7/1972	Japan	Kasano				x		x
	LR 2623466	2/1990	Japan	Sassa et al.				x		x
	MR 59-228776	6/1983	Japan	Maefutsu et al.				x		x
	NR 60-173829	2/1984	Japan	Maefutsu et al.				x		x
	OR 1-589351	05/1981	England							
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	RR 57-046669	10/1982	Japan							
G	SR 03-034549	02/1991	Japan							
	TR 54-071589	06/1979	Japan	Toyoda						

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G	UR	English Abstract of OOKI Japanese Application Published 9/19/82 under No. 57-153479.							
	VR	I. Akusuki et al., "Effects of AlN Buffer Layer on Crystallographic Structure... by MOVPE", J. Crystal Growth 98 (1989) pp. 209-19.							
	WR	Sayyah, A Study of Growth Mechanisms and Electrical and Optical Properties of Epitaxial Al _x Ga _{1-x} N Layers Grown by Atmospheric Pressure Metalorganic Chemical Vapor Deposition, A Dissertation presented to Faculty of the Graduate School, University of Southern California, February 1986, pp. 125-136.							
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Cont. of USSN 09/677,781 filed Oct 2, 2000

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SM	LR 58-046686	03/1983	Japan	Yoneda				X		X
	MR 54-071590	06/1979	Japan	Toyoda				X		X
	NR 02-081482	03/1990	Japan	Manabe				X		X
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	SR	Kiyoshi Takahashi, Semiconductor Engineering: Basic Characteristics of Semiconductor, Morikita Electric Engineering Series, Vol. 4, Chapter 14: Semiconductor Material Technics, 14.1: Forming of Semiconductor Material, August 1, 1975, p. 297.				
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	UR	Sano et al., Properties of III-V Nitride Semiconductors, Japanese Journal of Applied Physics, Vol. 52, No. 5, 1983, pp. 374-387.				
	VR	Miyoshi Haradome, Basics of Semiconductor Engineering, Chapter 8: Compound Semiconductor, 8.1, Conditions to be Semiconductor, August 30, 1967, p. 161.				
SM	WR	A.S. Grove, Physics and Technology of Semiconductor, Chapter 4: Basics of Semiconductor Physics, 1967, translated and published in Japan June 23, 1995, pp. 112-123.				

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	JR										
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	LR										
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VR	Pankove et al., Optical Absorption of GaN, Applied Physics Letters, Vol. 17, No. 5, September 1970, pp. 197-198.
WR	Amano et al., Effects of the Buffer Layer in Metalorganic Vapour Phase Epitaxy of GaN on Sapphire Substrate, Thin Solid Films, 163, (1988), pp. 415-420.
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AAR	Hiramatsu et al. "Effects of Buffer Layer in MOVPE Growth of GaN Film on Sapphire Substrate" Japanese Journal of Crystal Growth, 1998, Vol. 15, No. 3&4, pp. 334-342
BBR	Elwell et al. "Crystal Growth of Gallium Nitride" Prog. Crystal Growth and Charact. 1988, vol. 17, pp. 53-78.
CCR	
DDR	
EER	

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GR	JR	59-228776	12/1984	Japan	Maefutsu et al.		X	FULL	
GR	KR	56-080183	07/1981	Japan	Kobayashi et al.	X			X
	LR								
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	OR								
	PR								
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	SR	Jacob et al., <i>Efficient Injection Mechanism for Electroluminescence in GaN</i> , Applied Physics Letter, Vol. 30, No. 8, pp. 412-414, April 15, 1977			
	TR	Tietjen et al., <i>Vapor Phase Growth Technique and System for Several III-V Compound Semiconductors</i> , RCA Laboratories, 5 pages, March 1969		X	Partial
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